Amendments to the Claims

This listing of claims will replace all prior versions, and listings of claims in the application.

Claim 1 (Original). A method of promoting regeneration or survival of dopaminergic neurons in a mammal displaying signs or symptoms of dopaminergic neuronal degeneration, comprising administering to the mammal a therapeutically effective amount of an NgR1 antagonist.

Claim 2 (Original). The method of claim 1, wherein the NgR1 antagonist is administered directly into the central nervous system.

Claim 3 (Original). The method of claim 2, wherein the NgR1 antagonist is administered directly into the substantia nigra or the striatum.

Claim 4. (Original) The method of claim 2, wherein the NgR1 antagonist is administered by bolus injection or chronic infusion.

Claim 5 (Original). The method of claim 1, wherein the NgR1 antagonist comprises a soluble form of a mammalian NgR1.

Claim 6 (Currently amended). The method of claim 5, wherein the soluble form of a mammalian NgR1 comprises a peptide selected from the group consisting of:

(a) amino acids 26 to 310 of human NgR1 (SEQ ID NO:3) with up to ten conservative amino acid substitutions;

(b) amino acids 26 to 344 of human NgR1 (SEQ ID NO:4) with up to ten conservative amino acid substitutions;

(c) amino acids 27 to 310 of rat NgR1 (SEQ ID NO:5) with up to ten conservative amino acid substitutions; and

(d) amino acids 27 to 344 of rat NgR1 (SEQ ID NO:6) with up to ten conservative amino acid substitutions ~~comprises amino acids 26 to 310 of human NgR1 (SEQ ID NO: 3) with up to ten conservative amino acid substitutions; and (b) lacks (i) a functional transmembrane domain, and (ii) a functional signal peptide~~.

Claims 7-9 (Cancelled).

Claim 10 (Original). The method of claim 5, wherein the soluble form of a mammalian NgR1 further comprises a fusion moiety.

Claim 11 (Original). The method of claim 10, wherein the fusion moiety is an immunoglobulin moiety.

Claim 12 (Original). The method of claim 11, wherein the immunoglobulin moiety is an Fc moiety.

Claim 13 (Original). The method of claim 1, wherein the NgR1 antagonist comprises an antibody or antigen-binding fragment thereof that binds to a mammalian NgR1.

Claim 14 (Original). The method of claim 13, wherein the antibody is selected from the group consisting of a polyclonal antibody, a monoclonal antibody, a Fab fragment, a Fab' fragment, a $F(ab')_2$ fragment, an Fv fragment, an Fd fragment, a diabody, and a single-chain antibody.

Claim 15 (Original). The method of claim 13, wherein the antibody or antigen-binding fragment thereof binds to an polypeptide bound by a monoclonal antibody produced by a hybridoma selected from the group consisting of: HB 7E11 (ATCC® accession No. PTA-4587), HB 1H2 (ATCC® accession No. PTA-4584), HB 3G5 (ATCC® accession No. PTA-4586), HB 5B10 (ATCC® accession No. PTA-4588) and HB 2F7 (ATCC® accession No. PTA-4585).

Claim 16 (Original). The method of claim 15, wherein said monoclonal antibody is produced by the HB 7E11 hybridoma.

Claim 17 (Currently amended). The method of claim 16, wherein the polypeptide comprises an amino acid sequence selected from the group consisting of: AAAFTGLTLLEQLDLSDNAQLR (SEQ ID NO: 7); LDLSDNAQLR (SEQ ID NO: 8); LDLSDDAELR (SEQ ID NO: 9); LDLASDNAQLR (SEQ ID NO: 10); LDLASDDAELR (SEQ ID NO: 11); LDALSDNAQLR (SEQ ID NO: 12); LDALSDDAELR (SEQ ID NO: 13); LDLSSDNAQLR (SEQ ID NO: 14); LDLSSDEAELR (SEQ ID NO: 15); DNAQLRVVDPTT (SEQ ID NO: 16); DNAQLR (SEQ ID NO: 17); ADLSDNAQLRVVDPTT (SEQ ID NO: 18); LALSDNAQLRVVDPTT (SEQ ID NO: 19); LDLSDNAALRVVDPTT (SEQ ID NO: 20); LDLSDNAQLHVVDPTT (SEQ ID NO: 21); and LDLSDNAQLAVVDPTT (SEQ ID NO: 22).

Claim 18 (Currently amended). The method of claim 16, wherein the polypeptide consists of an amino acid sequence selected from the group consisting of: AAAFTGLTLLEQLDLSDNAQLR (SEQ ID NO: 7); LDLSDNAQLR (SEQ ID NO: 8); LDLSDDAELR (SEQ ID NO: 9); LDLASDNAQLR (SEQ ID NO: 10); LDLASDDAELR (SEQ ID NO: 11); LDALSDNAQLR (SEQ ID NO: 12); LDALSDDAELR (SEQ ID NO: 13); LDLSSDNAQLR (SEQ ID NO: 14); LDLSSDEAELR (SEQ ID NO: 15); DNAQLRVVDPTT (SEQ ID NO: 16); DNAQLR (SEQ ID NO: 17); ADLSDNAQLRVVDPTT (SEQ ID NO: 18); LALSDNAQLRVVDPTT (SEQ ID NO: 19); LDLSDNAALRVVDPTT (SEQ ID NO: 20); LDLSDNAQLHVVDPTT (SEQ ID NO: 21); and LDLSDNAQLAVVDPTT (SEQ ID NO: 22).

Claim 19 (Original). The method of claim 1, wherein the therapeutically effective amount is from 0.001 mg/kg to 10 mg/kg.

Claim 20 (Original). The method of claim 19, wherein the therapeutically effective amount is from 0.01 mg/kg to 1.0 mg/kg.

Claim 21 (Original). The method of claim 20, wherein the therapeutically effective amount is from 0.05 mg/kg to 0.5 mg/kg.

Claim 22 (Original). A method of claim 1, wherein the dopaminergic neuronal degeneration is associated with a disease or disorder selected from the group consisting of Parkinson's disease, multiple system atrophy, striatonigral degeneration, olivopontocerebellar atrophy, Shy-Drager syndrome, motor neuron disease with parkinsonian features, Lewy body dementia, progressive supranuclear palsy, cortical-basal ganglionic degeneration, frontotemporal dementia, Alzheimer's disease with parkinsonism, Wilson disease, Hallervorden-Spatz disease, Chediak-Hagashi disease, SCA-3 spinocerebellar ataxia, X-linked dystonia-parkinsonism (DYT3), Huntington's disease (Westphal variant), prion disease, vascular parkinsonism, cerebral palsy, repeated head trauma, postencephalitic parkinsonism and neurosyphilis.

Claim 23 (Original). A method of treating Parkinson's disease, comprising administering to the mammal a therapeutically effective amount of an NgR1 antagonist.